

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application

PATENT APPLICATION

Inventor(s): Wright, D.

SC/Serial No.: Unknown

Art Unit: N/A

Filed: July 17, 1995

Examiner: N/A

Title: Shared Virtual Desktop  
Collaborative Application System

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited in the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231, on January 2, 2001

Signed by: Megan Beltran

Signature Date: January 2, 2001

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents  
Box Patent Application  
Washington, D.C. 20231

Sir:

This Preliminary Amendment is filed concurrent with the above-identified Utility Application, filed July 17, 1995 pursuant to 37 C.F.R. §1.53(b).

Amendments

Please amend the above-identified application as follows:

In the Specification:

Page 1, line 8: insert the following text therein:

Reference to Related Application

This is a divisional of co-pending application Ser. No. 08/503,453, filed on July 17, 1995, now U.S. Patent No. \_\_\_\_\_, issued \_\_\_\_\_.

In the Claims:

Please Amend Claims 1 through 14 as provided below:

1           1.     (Once Amended) An environment manager providing for the controlled  
2 execution of [respective] application programs in respective primary and alternate  
3 application execution environments within a computer system operating under the  
4 control of an operating system including a primary input queue and a primary output  
5 routine, said operating system providing for the management of a graphical user  
6 interface in support of the execution of said application programs and wherein said  
7 application programs are device independent application programs, said  
8 environment manager comprising:

9               a) an alternate input queue for storing input data for applications  
10 executing in the alternate application environment;

11              b) an alternate output routine for managing the processing of output  
12 data provided by applications executing in said alternate application environment;  
13 and

14              c) a control routine coupled to said operating system to selectively  
15 provide for the concurrent use of said primary input queue and said primary output  
16 routine or of said alternate input queue and said alternate output routine, said control  
17 routine further providing for the transfer of the output data processed by said  
18 alternate output routine to said primary output routine.

1           2.     (Once Amended) The environment manager of Claim 1 wherein said  
2 control routine provides a display buffer area and wherein said alternate output  
3 routine provides for the processing of said output data provided by said applications  
4 executing in said alternate application environment into said display buffer area.

1           7.     (Once Amended) A computer system providing for the alternate  
2 execution of first and second sets of application programs, said computer system  
3 comprising:

4               a) a processor including an input device and an output device;

5               b) an operating system executable by said processor to support the  
6 execution of device independent application programs, said operating system  
7 including a graphical user interface manager coupleable through an output driver to  
8 said output device and an input interface including an input queue coupleable  
9 through an input driver to said input device, said operating system including a first  
10 list of a first set of said device independent application programs executable by said  
11 processor and a second list of application program windows corresponding to said  
12 first set of said device independent application programs; and

13              c) an environment manager executable by said processor including a  
14 third list of a second set of said device independent application programs and a

15 fourth list of application program windows corresponding to said second list of said  
16 device independent application programs, execution of said environment manager  
17 providing for the inclusion of said environment manager in said first and second sets  
18 and for selectively swapping with said operating system said first and third lists and  
19 said second and fourth lists to switch between the execution of said first and second  
20 sets of said device independent application programs.

1 8. (Once Amended) The computer system of Claim 7 wherein said  
2 environment manager determines to swap between the execution of said first and  
3 second sets of said device independent application programs based upon the relative  
4 amount of data in said input queue for said first and second sets of said device  
5 independent application programs.

1 9. (Once Amended) The computer system of Claim 7 or 8 wherein said  
2 environment manager determines to provide said operating system with an alternate  
3 output driver to couple said operating system to said output device, said alternate  
4 output driver providing for the processing of output data provided through the  
5 execution of said second set of said device independent application programs.

1 10. (Once Amended) A method of executing computer application  
2 programs in primary and alternate application execution environments in a computer  
3 system under the control of an operating system, including a graphical user interface  
4 manager, wherein input events are provided through said graphical user interface  
5 manager of said [the] operating system to application programs and wherein output  
6 events are provided through said graphical user interface manager [to] a display  
7 driver, said method comprising the steps of:

8 a) establishing a primary display driver for receiving and processing  
9 output events provided from a first application program executing in a primary  
10 application execution environment;

11 b) establishing an alternate display driver for receiving and processing  
12 output events provided from a second application program executing in an alternate  
13 application environment;

14 c) selecting for execution by said computer system, subject to the  
15 control of the operating system, a predetermined one of said first and second  
16 application programs; and

17 d) selectively providing an output event to said primary display driver  
18 reflecting the output events provided from said application programs executing in said  
19 alternate application environment.

1 11. (Once Amended) The method of Claim 10 wherein input events to said  
2 graphical user interface manager [the operating system] include a plurality of types  
3 of input events distinguished by source identifying data, said method further  
4 comprising the steps of:

5 a) receiving a predetermined input event for said second application  
6 program;  
7 b) providing for the scheduled execution of said second application  
8 program; and  
9 c) providing for the coupling of said alternate display driver to said  
10 graphical user interface manager [said operating system] to receive and process  
11 output events upon scheduled execution of said second application program.

Delete Claims 15 through 20 without prejudice and add new claims 21 through 33 as provided below:

1 21. (New) A method of operating a host computer system to enable  
2 collaborative use of an application program with a client computer system to  
3 provide windowed displays of information reflective of said collaborative use  
4 of said application program on respective host and client computer system  
5 displays, wherein said application program is executed by the host computer  
6 system in conjunction with an operating system and communicates input and  
7 output data reflecting the collaborative use of said application program with  
8 said client computer system, said method comprising the steps of:  
9 a) maintaining a display data structure in conjunction with said  
10 operating system, said display data structure including first data defining a first  
11 set of display windows determined through the execution of a shared  
12 application program and second data defining a second set of display  
13 windows determined through the execution of a non-shared application  
14 program;  
15 b) maintaining an event data structure in conjunction with said  
16 operating system, said event data structure including third data descriptive of  
17 events generated in connection with the execution of said shared application  
18 program and fourth data descriptive of events generated in connection with  
19 the execution of said non-shared application program;  
20 c) hiding said second and fourth data from said operating  
21 system during the execution of said shared application program;  
22 d) hiding said first and third data from said operating system  
23 during the execution of said non-shared application program; and  
24 e) switching between the execution of said shared and non-  
25 shared application programs based on predetermined criteria to simulate the  
26 concurrent execution of said shared and non-shared application programs.

1 22. (New) The method of Claim 21 further comprising the step of  
2 transforming said first data between first and second display coordinate

3 systems, wherein said second display coordinate system is mapped to within  
4 a predetermined one of said second set of display windows.

1 23. (New) The method of Claim 22 further comprising the steps of:  
2 a) transferring said first data to a predetermined client computer  
3 system; and  
4 b) transferring events generated by said predetermined client  
5 computer system with respect to said first data to said event data structure as  
6 part of said third data.

1 24. (New) The method of Claim 23 wherein said step of transferring  
2 said first data transfers said as transformed by said step of transforming.

1 25. (New) The method of Claim 24 wherein said events transferred  
2 by said step of transferring events include data reflective of the location within  
3 said second display coordinate system at which said events were generated.

1 26. (New) The method of Claim 25 further comprising the step of  
2 associating said events transferred by said step of transferring events with  
3 respective application programs of said first set of application programs.

1 27. (New) A method of managing the execution of application  
2 programs in connection with the execution of a multi-tasking operating system  
3 by a host computer system, said method comprising the steps of:  
4 a) first providing for the handling of events and the processing  
5 of display data for a first class of application programs through the use of a  
6 first data structure;  
7 b) second providing for the handling of events and the  
8 processing of display data for a second class of application programs through  
9 the use of a second data structure;  
10 c) selectively coupling either of said first and second data  
11 structures with said multi-tasking operating system in correspondence with the  
12 execution of application programs of either said first and second classes of  
13 application programs; and  
14 d) managing a collaborative communications session with  
15 respect to a client computer system including routing events received from said  
16 client computer system to a predetermined one of said first and second data  
17 structures and routing display data from said predetermined one of said first  
18 and second data structures to said client computer system  
19 whereby the handling of events for collaboratively used application  
20 programs is maintained separate from the handling of events for non-  
21 collaboratively used application programs.

1           28. (New) The method of Claim 27 wherein said step of first  
2 providing further provides for the processing of the display data of said first  
3 class of applications to produce transformed display data for a predetermined  
4 application program of said second class of application programs.

1           29. (New) The method of Claim 28 wherein said step of selectively  
2 coupling enables said multi-tasking operating system to access and further  
3 process the display data provided in the one of said first and second data  
4 structures selectively coupled with said multi-tasking operating system.

1           30. (New) The method of Claim 29 wherein said step of first  
2 providing operates with said step of selectively coupling to couple said first  
3 data structure with a first display driver that provides for the transformation of  
4 display data from said first data structure into said transformed display data.

1           31 (New) The method of Claim 30 wherein said step of managing  
2 provides for the routing of said transformed display data to said client  
3 computer system.

1           32. (New) The method of Claim 31 wherein said step of second  
2 providing operates with said step of selectively coupling to couple said second  
3 data structure, including said transformed display data, with a second display  
4 driver.

1           33. (New) The method of Claim 32 wherein said predetermined  
2 application program provides display data to said second data structure to  
3 represent a host display window and wherein said first display driver provides  
4 for the transformation of the display data from said first data structure to  
5 relative display coordinates mappable onto said host display window.

Remarks

Status of Application:

This Preliminary Amendment is filed concurrently with the filing of a Divisional Application under 37 C.F.R. §1.53(b) with a claim of priority under 35 U.S.C. §120 to:

Application Serial No.:	08/503,453
Filed:	July 17, 1995
Entitled:	Shared Virtual Desktop Collaborative Application System
Inventor:	D. Wright

The Specification and Drawings are true copies of the same documents filed in Application Serial No. 08/503,453. An Information Disclosure Statement is filed herewith.

Status of Claims:

Claims 1 - 14 and 21 - 33 are pending in the current Application. Claims 15 through 20 should be considered cancelled prior to the calculation of the filing fee.

Conclusion:

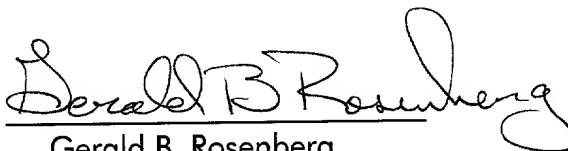
Applicant respectfully asserts that Claims 1 - 14 and 21 through 33 are properly in condition for allowance. The Examiner is respectfully requested to take action consistent therewith and pass this application on to issuance. The Examiner is respectfully requested to contact the Applicants' Attorney, at the telephone number provided below, in regard to any matter that the Examiner may identify that might be resolved through a teleconference with the Examiner.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-0890 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: January 2, 2001

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